

## CLAIMS

1. An apparatus for cooling and cleaning emission gas comprising:

an exhaust air duct for discharging hot gas (hot wind) and volatile gas generated by heating of flux;

storage baths for storing cooling liquid; and

a blower for injecting emission gas including hot gas (hot wind) and volatile gas generated by heating of flux sent from the exhaust air duct against the surface of the cooling liquid with a pressure.

2. An apparatus for cooling and cleaning emission gas comprising:

an exhaust air duct for hot gas (hot wind) and volatile gas generated by heating of flux disposed at an intake and an outlet of a heating portion of a reflow furnace;

storage baths for storing cooling liquid; and

a blower for injecting emission gas including hot gas (hot wind) and volatile gas generated by heating of flux sent from the exhaust air duct against the surface of the cooling liquid with pressure.

3. The apparatus for cooling and cleaning emission gas according to claim 1 or 2, wherein an injection port for hot gas (hot wind) and volatile gas generated by heating of flux sent from the exhaust air duct is disposed in the vicinity of

the surface of cooling liquid; the injection port is disposed in a condition of being floated on the liquid surface with floats; and the injection port on the floats is lifted up/down corresponding to changes of the level of the cooling liquid so that the distance between the liquid surface and the injection port is kept constant.

4. The apparatus for cooling and cleaning emission gas according to any one of claims 1 to 3, wherein the emission gas from the injection port is injected to collide with a scattering plate so that it is scattered.

5. The apparatus for cooling and cleaning emission gas according to any one of claims 1 to 4, wherein emission gas including hot gas (hot wind) and volatile gas generated by heating of flux sent from the injection port is made to collide with the liquid surface so as to generate spray of water so that fog-like water droplets make contact with the hot gas to secure cooling efficiency.